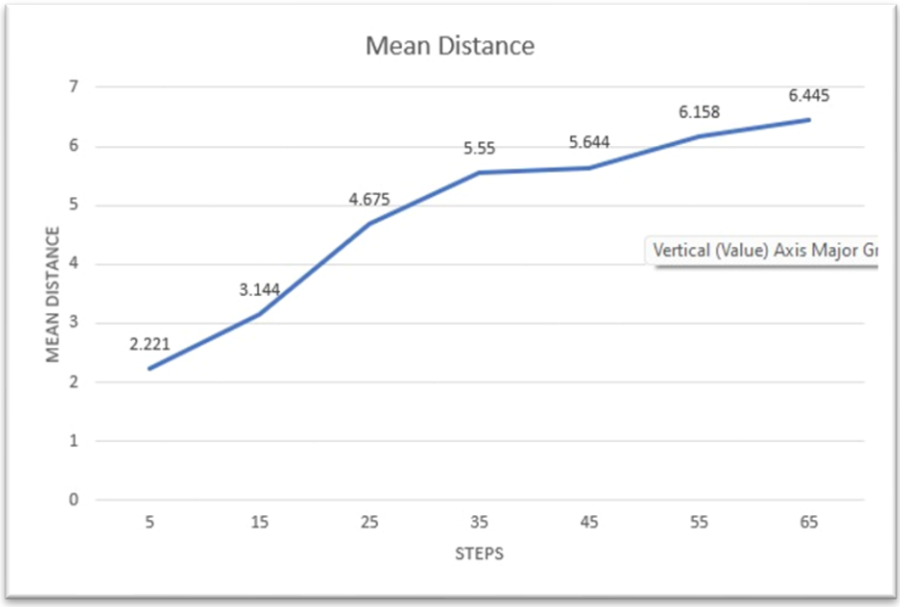
Assignment 1

➢ *Conclusion about relationship between d and n:*

- From the experiment, I have reached to the conclusion that the mean distance ($\frac{\text{total distance in all the experiments}}{total\ number\ of\ experiments}$) is equal to $\sqrt{(steps\ in\ each\ experiment)}$

➢ *Evidence to support the relationship:*

- **Graph**



- **Output Of Program:**

```
number of steps: 5 mean distance: 2.221051228808646 over 50 experiments
number of steps: 15 mean distance: 3.1448656683880505 over 50 experiments
number of steps: 25 mean distance: 4.675610975055186 over 50 experiments
number of steps: 35 mean distance: 5.5001361011634335 over 50 experiments
number of steps: 45 mean distance: 5.644758878139466 over 50 experiments
number of steps: 55 mean distance: 6.158366143207032 over 50 experiments
number of steps: 65 mean distance: 6.44529832311028 over 50 experiments
```

- ***Screenshot of unit tests:***